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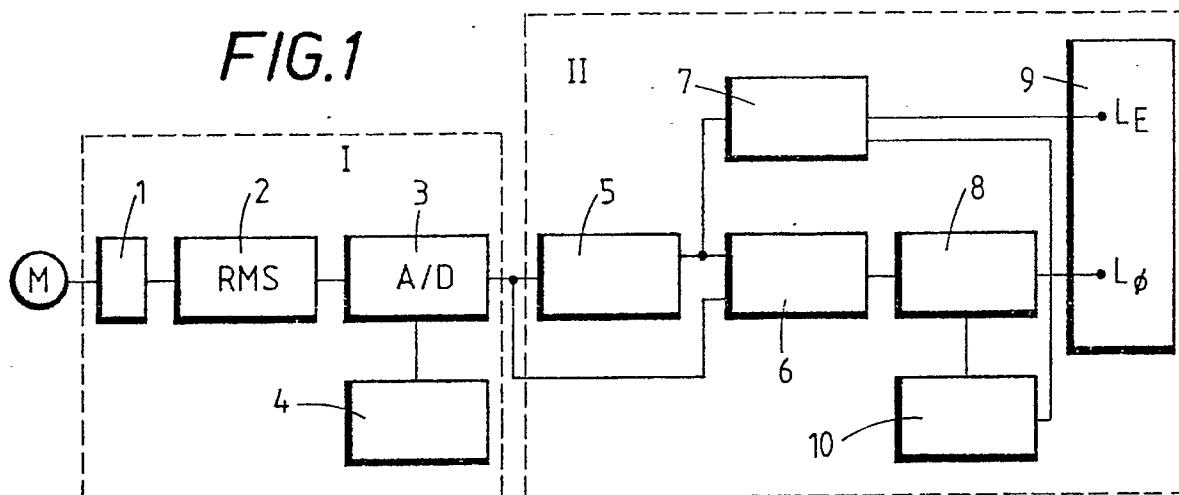
Method and micro-processor-based apparatus for measuring environmental noise pollution.

This invention relates to a method and a microprocessor-based apparatus for directly measuring the noise using a nuisance index (L_D) bound to two physical parameters of the noise: the average energy level (L_E) and the fluctuation level of the noise.

The apparatus is comprised of a microphone (M) connected to a pre-amplifier (1) and a detecting unit (2) controlling an analogical-to-digital converter (3)

associated to a time (4) feeding a signal to a digital filter (5) and at the same time to one input of a comparator (6). The filter (5) feeds the filtered signal to an integrator (7) supplying the parameter (L_E) and simultaneously to the second input of comparator (6) which supplies the parameter (L_ϕ) through counter (8) associated to a trimmer (10). Parameters (L_E) and (L_ϕ) are indicated in block (9) of the display.

FIG.1





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EUROPEAN SEARCH REPORT

Application Number

EP 88 83 0545

DOCUMENTS CONSIDERED TO BE RELEVANT					
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl.5)		
D,Y	APPLIED ACOUSTICS, vol. 7, 1974, pages 47-56, London, GB; C.B. CANNELLI et al.: "Direct measurment of noise nuisance by the new index Ldi" * Page 47, line 1 - page 51, line 6; page 55, line 1 - page 56, line 10 *	1	G 01 H 3/14		
A	----- IDEM	2,3			
Y	----- US-A-3 747 703 (KNOWD & SULLIVAN) * Abstract; figures 1,2,6,7; claims 1,9,10,21,22 *	1			
A	-----	2,3			
D,A	T.J. SCHULTZ: "Community noise rating", second edition, 1982, pages 113-127, Applied Science Publishers, London, GB * Whole document *	1			
A	----- E.D.N. ELECTRICAL DESIGN NEWS, vol. 31, no. 9, 1986, page 261, Newton, MA, US; R.J. ZAVREL: "IF chip forms audio decibel-level detector" * Whole document *	3			
A	----- US-A-3 848 471 (HAMBURG & WHITNEY) * Abstract; figures; claims *	1-3	TECHNICAL FIELDS SEARCHED (Int. Cl.5) G 01 H		
A	----- REVIEW OF SCIENTIFIC INSTRUMENTS, vol. 44, no. 11, 1973, pages 1618-1620, New York, US; J.A. HAMBURG: "A noise pollution level instrument" * Whole document *	1,2			
The present search report has been drawn up for all claims					
Place of search The Hague		Date of completion of search 22 March 91	Examiner DE HEERING P.		
<table border="0"><tr><td>CATEGORY OF CITED DOCUMENTS X: particularly relevant if taken alone Y: particularly relevant if combined with another document of the same category A: technological background O: non-written disclosure P: intermediate document T: theory or principle underlying the invention</td><td>E: earlier patent document, but published on, or after the filing date D: document cited in the application L: document cited for other reasons ----- &: member of the same patent family, corresponding document</td></tr></table>				CATEGORY OF CITED DOCUMENTS X: particularly relevant if taken alone Y: particularly relevant if combined with another document of the same category A: technological background O: non-written disclosure P: intermediate document T: theory or principle underlying the invention	E: earlier patent document, but published on, or after the filing date D: document cited in the application L: document cited for other reasons ----- &: member of the same patent family, corresponding document
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